

WE CLAIM:

1. A controlled release pharmaceutical composition, the composition comprising carbidopa, levodopa, and a combination of a low molecular weight cellulose ether and a medium molecular weight cellulose ether, wherein the low molecular weight cellulose ether and the medium molecular weight cellulose ether are the same type of cellulose ether.
2. The controlled release pharmaceutical composition of claim 1, wherein the low molecular weight cellulose ether and the medium molecular weight cellulose ether comprise hydroxypropyl cellulose ether.
3. The controlled release pharmaceutical composition of claim 1, wherein the low molecular weight cellulose ether and the medium molecular weight cellulose ether comprise hydroxypropyl methyl cellulose ether.
4. The controlled release pharmaceutical composition of claim 1, wherein the low molecular weight cellulose ether comprises hydroxypropyl cellulose ether having a number average molecular weight of between approximately 55,000 and approximately 70,000.
5. The controlled release pharmaceutical composition of claim 4, wherein the low molecular weight hydroxypropyl cellulose has a number average molecular weight of approximately 65,000.
6. The controlled release pharmaceutical composition of claim 1, wherein the medium molecular weight cellulose ether comprises hydroxypropyl cellulose ether having a number average molecular weight of between approximately 110,000 and approximately 150,000.
7. The controlled release pharmaceutical composition of claim 6, wherein the medium molecular weight hydroxypropyl cellulose has a number average molecular weight of approximately 125,000.

- 1 8. The controlled release pharmaceutical composition of claim 1, wherein a ratio
2 of low molecular weight cellulose ether to medium molecular weight cellulose
3 ether is approximately 0.75:1 to 1.5:1.
- 1 9. The controlled release pharmaceutical composition of claim 1, wherein a ratio
2 of low molecular weight cellulose ether to medium molecular weight cellulose
3 ether is approximately 1:1.
- 1 10. The controlled release pharmaceutical composition of claim 1, wherein the
2 total cellulose ether concentration is between approximately 2% and
3 approximately 20% w/w of the composition.
- 1 11. The controlled release pharmaceutical composition of claim 1, wherein the
2 pharmaceutical composition comprises a tablet.
- 1 12. The controlled release pharmaceutical composition of claim 1, further
2 comprising one or more pharmaceutical excipients.
- 1 13. The controlled release pharmaceutical composition of claim 12, wherein the
2 one or more pharmaceutical excipients comprise one or more diluents, binders,
3 disintegrants, lubricants, glidants, colorants, and flavoring agents.
- 1 14. A process for the preparation of a controlled release composition of carbidopa
2 and levodopa, the process comprising: blending carbidopa, levodopa, a low
3 molecular weight cellulose ether, and a medium molecular weight cellulose
4 ether; optionally granulating the blend with a binder; and compressing into a
5 tablet, wherein the low molecular weight cellulose ether and the medium
6 molecular weight cellulose ether are the same type of cellulose ether.
- 1 15. The process of claim 14, further comprising blending with one or more
2 pharmaceutically acceptable excipients.
- 1 16. The process of claim 14, wherein the low molecular weight cellulose ether and
2 the medium molecular weight cellulose ether comprise hydroxypropyl
3 cellulose ether.

- 1 17. The process of claim 14, wherein the low molecular weight cellulose ether
2 comprises hydroxypropyl cellulose ether having a number average molecular
3 weight of between approximately 55,000 and approximately 70,000.
- 1 18. The process of claim 14, wherein the medium molecular weight cellulose ether
2 comprises hydroxypropyl cellulose ether having a number average molecular
3 weight of approximately 110,000 to approximately 150,000.
- 1 19. The process of claim 14, wherein granulating comprises one of a wet
2 granulation or a dry granulation technique.
- 1 20. The process of claim 19, wherein the wet granulation is done with one or more
2 of an aqueous, hydro-alcoholic, or alcoholic dispersion of the binder.
- 1 21. A method of providing dopamine to the brain, the method comprising
2 administering a tablet comprising carbidopa, levodopa, a low molecular weight
3 cellulose ether, and a medium molecular weight cellulose ether, wherein the
4 low molecular weight cellulose ether and the medium molecular weight
5 cellulose ether are the same type of a cellulose ether.
- 1 22. The method of claim 21, wherein the low molecular weight cellulose ether
2 comprises hydroxypropyl cellulose ether having a number average molecular
3 weight of between approximately 55,000 and approximately 70,000.
- 1 23. The method of claim 21, wherein the medium molecular weight cellulose ether
2 comprises hydroxypropyl cellulose ether having a number average molecular
3 weight of approximately 110,000 to approximately 150,000.
- 1 24. A method of treating Parkinson's disease, the method comprising
2 administering a pharmaceutical composition to a patient in need of treatment
3 for Parkinson's disease, the pharmaceutical composition comprising carbidopa,
4 levodopa, a low molecular weight cellulose ether, and a medium molecular
5 weight cellulose ether, wherein the low molecular weight cellulose ether and
6 the medium molecular weight cellulose ether are the same type of cellulose
7 ether.

- 1 25 The method of claim 24, wherein the low molecular weight cellulose ether
2 comprises hydroxypropyl cellulose ether having a number average molecular
3 weight of between approximately 55,000 and approximately 70,000.
- 1 26 The method of claim 24, wherein the medium molecular weight cellulose ether
2 comprises hydroxypropyl cellulose ether having a number average molecular
3 weight of approximately 110,000 to approximately 150,000.